

83	31.8	3.5	1549	20	AAK24921	Human ras carboxy-
84	31.8	3.5	1553	20	AAV81285	Human RCE1 (hrce1)
C	31.8	3.5	1872	20	AAK00622	Human secreted pro
C	31.8	3.5	1988	23	ABL13925	Drosophila melanog
87	31.8	3.5	2922	23	ABL03765	Drosophila melanog
88	31.8	3.5	5378	23	ABL13924	Drosophila melanog
C	31.8	3.5	5748	23	ABL03764	Drosophila melanog
90	31.6	3.5	494	20	AAK51447	Human secreted pro
91	31.6	3.5	496	20	AAK40768	Human secreted pro
92	31.6	3.5	496	20	AAK8189	Human secreted pro
93	31.6	3.5	496	20	AAK97562	Human secreted pro
94	31.6	3.5	496	20	AAK11367	Human secreted pro
95	31.6	3.5	496	20	AAK39428	Human secreted pro
96	31.6	3.5	496	20	AAK40426	Human secreted pro
97	31.6	3.5	496	20	AAK51775	Human secreted pro
98	31.6	3.5	496	20	AAK30081	Human secreted pro
99	31.6	3.5	496	20	AAK26670	Human secreted pro
100	31.6	3.5	496	20	AAK19981	Human secreted pro

ALIGNMENTS

RESULT 1
AAZ12218
ID AAZ12218 standard; DNA: 897 BP.
AC AAZ12218;
XX
DT 08-OCT-1999 (first entry)
XX
DE Neisseria meningitidis strain A complete ORF138 sequence.
XX
KW Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine;
XX treatment; Neisseria infection; meningitis; septicemia; gonorrhea; ss.
XX
OS Neisseria meningitidis.
XX
PN WO924578-A2.
XX
PD 20-MAY-1999.
XX
PF 09-OCT-1998; 98WO-IB01665.
XX

XX
PR 01-SEP-1998; 98GB-0019016.
PR 06-NOV-1997; 97GB-0023516.
PR 14-NOV-1997; 97GB-0024190.
PR 18-NOV-1997; 97GB-0024386.
PR 27-NOV-1997; 97GB-0025158.
PR 10-DEC-1997; 97GB-0026147.
PR 14-JAN-1998; 98GB-0000759.
XX
PA (CHTR-) CHIRON SPA.
XX
PI Grandi G, Masignani V, Pizza M, Rappuoli R, Scarlato V;
XX
DR WPI: 1999-327407/27.
XX P-PSDB: AAY38783.
XX
PT Proteins from Neisseria meningitidis and N. gonorrhoeae useful for
XX diagnosis, treatment and prevention of infection
XX
PS Claim 9; Page 326-327; 524pp; English.
XX
CC Nucleotide sequences AAZ1972-212358 represent open reading frames
CC (ORFs) of Neisseria meningitidis and N. gonorrhoeae which encode
CC antigenic proteins (see AAY38499-Y38944). The antigenic proteins, their
CC fragments, their nucleic acids and antibodies are used for diagnosis,
CC prevention (as vaccines) or treatment of Neisseria infections,
CC such as meningitis, septicemia and gonorrhea. Both organisms
CC are closely related. Fragments of the nucleic acids are useful
CC as hybridisation probes and antisense reagents.
XX

Sequence 897 BP; 225 A; 266 C; 225 G; 181 T; 0 other;

Query Match 100.0%; Score 897; DB 20; Length 897;
Best Local Similarity 100.0%; Pred. No. 3.3e-263;
Matches 897; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	atgttcggtttacatcaatcagctgtttccctttggaacccgcatcactctgtg	60
DB	1	atgttcggtttacatcagctgtttccctttggaacccgcatcactctgtg	60
QY	61	accgcctctcaaatgctcctcctgctgccttctctgctcagacgttggaaac	120
DB	61	accgcctctcaaatgctcctcctgctgccttctctgctcagacgttggaaac	120
QY	121	cggtctgacatctgctgtttacatttaaggaagaccgctgcgtatcgccaat	180
DB	121	cggtctgacatctgctgtttacatttaaggaagaccgctgcgtatcgccaat	180
QY	181	atgcgtcagcagcagatgataccgaccccaaaacgctcaagccgttttgcgaaacg	240
DB	181	atgcgtcagcagcagatgataccgaccccaaaacgctcaagccgttttgcgaaacg	240
QY	241	gcaaaagcggttggaaactgcccccgcttlttcaagaaacggaagacatagaaca	300
DB	241	gcaaaagcggttggaaactgcccccgcttlttcaagaaacggaagacatagaaca	300
QY	301	atgttcaaaagcgttacacgctggtggaacatgtgcacagcgtttggacaacgaaggg	360
DB	301	atgttcaaaagcgttacacgctggtggaacatgtgcacagcgtttggacaacgaaggg	360
QY	361	ctgctattcatcagcgcacacacacacacacacacacacacacacacacacacac	420
DB	361	ctgctattcatcagcgcacacacacacacacacacacacacacacacacacacac	420
QY	421	caagcttcggttcggtcgtgacgcgcacatgtacaacccgcgaataatcaagcgatagacaa	480
DB	421	caagcttcggttcggtcgtgacgcgcacatgtacaacccgcgaataatcaagcgatagacaa	480
QY	481	atcatgcaagcggtggaaggttcggaaggaagaaacacggtctacacagatcaaggg	540
DB	481	atcatgcaagcggtggaaggttcggaaggaagaaacacggtctacacagatcaaggg	540
QY	541	gtcaacaacatcatcaaaagccctgttcggtggaagcaacacatcgtctccgacac	600
DB	541	gtcaacaacatcatcaaaagccctgttcggtggaagcaacacatcgtctccgacac	600
QY	601	gtcccttcctcctcaagaaagcggtggaagcgatggtgtgattctctcgcaacctggc	660
DB	601	gtcccttcctcctcaagaaagcggtggaagcgatggtgtgattctctcgcaacctggc	660
QY	661	tatacatgacgttgcgcaaaatgtgcacacgtcaaaagcgttgcgaacccgttttc	720
DB	661	tatacatgacgttgcgcaaaatgtgcacacgtcaaaagcgttgcgaacccgttttc	720
QY	721	tgtctggaagcgtctgctgctgcgaaggttcgatttgacacacgcccgttccaaagg	780
DB	721	tgtctggaagcgtctgctgctgcgaaggttcgatttgacacacgcccgttccaaagg	780
QY	781	gaattgaacggtgcaaaagcccatgacggttcgttcaacgcgaatcgcgaatattg	840
DB	781	gaattgaacggtgcaaaagcccatgacggttcgttcaacgcgaatcgcgaatattg	840
QY	841	atacgcgttttcgacgacgtatcttattgacaaacgctacaacatggcgttaa	897
DB	841	atacgcgttttcgacgacgtatcttattgacaaacgctacaacatggcgttaa	897

RESULT 2
AAZ53711
ID AAZ53711 standard; DNA: 897 BP.
XX
AC AAZ53711;

Sequence 897 BP; 225 A; 266 C; 225 G; 181 T; 0 other;

```

mismatches 0; conservative 0; mismatches 0; indels 0; gaps 0

```

121 cggctcggacatctggcgttttaaccttaaggaaccgcgcgcatactgcacat 180

RESULT	3
AAF91451	
ID	AAF91451 standard; DNA; 894 BP.

ID AAF91451 standard; DNA; 894 BP.

AC AAF91451;
VY

04-MAY-2001 (first entry)

XX N. meningitidis (serogroup B) HcrB gene coding region, SEQ ID:77

KW genetically modified; protective antigen expression; LPS detoxification;

Immunoprotective; non-toxic; paediatric; HTRB; ds.

05 *Neisseria meningitidis*.
XY

PN MOZ00109350-AZ
XX

XX

XX

DR MPI: 1999-327407/27.
 DR P-PSDB: AAY38782.
 XX
 PT Proteins from *Neisseria meningitidis* and *N. gonorrhoeae* useful for
 PT diagnosis, treatment and prevention of infection
 XX
 PS Claim 9: Page 326; 524pp; English.
 XX
 CC Nucleotide sequences AA21972-212358 represent open reading frames
 CC (ORFs) of *Neisseria meningitidis* and *N. gonorrhoeae* which encode
 CC antigenic proteins (see AAY38499-438944). The antigenic proteins, their
 CC fragments, their nucleic acids and antibodies are used for diagnosis,
 CC prevention (as vaccines) or treatment of *Neisseria* infections,
 CC such as meningitis, septicemia and gonorrhea. Both organisms
 CC are closely related. Fragments of the nucleic acids are useful
 CC as hybridisation probes and antisense reagents.
 CC
 SQ Sequence 897 BP; 223 A; 266 C; 227 G; 181 T; 0 other;

Query Match 99.1%; Score 889; DB 20; Length 897;
 Best Local Similarity 99.4%; Pred. No. 9e-261;
 Matches 892; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 1 atgttgcgttacaatacgaagctgttccccccttgcgaacgcgtacatccgtgtg 60
 Db 1 atgttgcgttacaatacgaagctgttccccccttgcgaacgcgtacatccgtgtg 60
 QY 61 accgcccgtcctaatacgtcctccctgctgcgcgttctctgtcgaacgcgtggaac 120
 Db 61 accgcccgtcctaatacgtcctccctgctgcgcgttctctgtcgaacgcgtggaac 120
 QY 121 cggctcggacatctggtcgttcttaccctttaagaagacgcgcgcgtatcgccaat 180
 Db 121 cggctcggacatctggtcgttcttaccctttaagaagacgcgcgcgtatcgccaat 180
 QY 181 atgctcgaagcgaatgaatcccccgaaccccaacgcgtcaaacgcgttttgcggaacg 240
 Db 181 atgctcgaagcgaatgaatcccccgaaccccaacgcgtcaaacgcgttttgcggaacg 240
 QY 241 gcaaaagcggttgcgaactgtcccccgcgttcttcaagaacacgcggaacatgaaca 300
 Db 241 gcaaaagcggttgcgaactgtcccccgcgttcttcaagaacacgcggaacatgaaca 300
 QY 301 atgttcaaacggtacacgcgtcgtggaacatgtcgaacgcgttgcgaacacgaaggg 360
 Db 301 atgttcaaacggtacacgcgtcgtggaacatgtcgaacgcgttgcgaacacgaaggg 360
 QY 361 ctgtatcatcacgcgcgcacatcgcgaagcttgcgaacgcgttgcgaacacgaaggg 420
 Db 361 ctgtatcatcacgcgcgcacatcgcgaagcttgcgaacgcgttgcgaacacgaaggg 420
 QY 421 cagcttcggtccgcgtcgcgcacatgtacaaacgcgcgaacatcaaacgatagaaca 480
 Db 421 cagcttcggtccgcgtcgcgcacatgtacaaacgcgcgaacatcaaacgatagaaca 480
 QY 481 atcatgaagcggtggttcgcgcgaaggaacacgcgcgtcctaccagatacaagg 540
 Db 481 atcatgaagcggtggttcgcgcgaaggaacacgcgcgtcctaccagatacaagg 540
 QY 541 gtcaaaacatcatcaaacgcgtcgtcgcgcgaacacacatcgtccgcgcgcacac 600
 Db 541 gtcaaaacatcatcaaacgcgtcgtcgcgcgaacacacatcgtccgcgcgcacac 600
 QY 601 gtcccccctcctaagaagcggtggtatggtatcttccttcgcgaacacgcgc 660
 Db 601 gtcccccctcctaagaagcggtggtatggtatcttccttcgcgaacacgcgc 660
 QY 661 tataccatgcgtcgtcgcgaacatgtcgaacgcgttgcgaacacgcgtttttc 720
 Db 661 tataccatgcgtcgtcgcgaacatgtcgaacgcgttgcgaacacgcgtttttc 720
 QY 721 tgcgtcgaacgcgtcgtcgcgaacaggttcgattgcacatccgccgcgaaggg 780

Db 721 tgcgtcgaacgcgtcgtcgcgaacaggttcgattgcacatccgccgcgaaggg 780
 QY 781 gaattgaacgcgcgaacacacacatgcgcgcgttgcgaacacgcgcgaatgtg 840
 Db 781 gaattgaacgcgcgaacacacacatgcgcgcgttgcgaacacgcgcgaatgtg 840
 QY 841 ataagcgttctccgcgcgcgtatctgttatgtacaacgcgtacaaatgcgttaa 897
 Db 841 ataagcgttctccgcgcgcgtatctgttatgtacaacgcgtacaaatgcgttaa 897
 RESULT 5
 ID AA253712
 AC AA253712 standard; DNA; 897 BP.
 DT 21-MAR-2000 (first entry)
 XX
 DE *Neisseria meningitidis* ORF 505 partial DNA sequence SEQ ID NO:1373.
 KW *Neisseria meningitidis*; *Neisseria gonorrhoeae*; antigen; vaccine;
 KW antigenic; diagnosis; immunogenic; infection; meningitis; septicemia;
 KW antibacterial; gene therapy; ds.
 XX
 OS *Neisseria meningitidis*.
 XX
 FN WO957280-A2.
 XX
 PD 11-NOV-1999.
 XX
 PF 30-APR-1999; 99WO-US09346.
 XX
 PR 01-MAY-1998; 98US-0083758.
 PR 31-JUL-1998; 98US-0094869.
 PR 02-SEP-1998; 98US-0098994.
 PR 02-SEP-1998; 98US-0099062.
 PR 09-OCT-1998; 98US-0103749.
 PR 09-OCT-1998; 98US-0103794.
 PR 09-OCT-1998; 98US-0103796.
 PR 25-FEB-1999; 99US-0121528.
 XX
 PA (CHIR) CHIRON CORP.
 PA (GENO-) INSTR GENOMIC RES.
 XX
 PI Fraser C, Galeotti C, Grandi G, Hickey E, Masignani V, Mora M;
 PI Petersen J, Pizsa M, Rappuoli R, Ratti G, Scalato E, Scarselli M;
 PI Tettelin H, Venter JC;
 XX
 DR MPI: 2000-062150/05.
 DR P-PSDB: AAY74950.
 XX
 PT Novel *Neisseria* polypeptides predicted to be useful antigens for
 PT vaccines and diagnostics
 XX
 PS Claim 7: Page 746-747; 1453pp; English.
 PS
 CC AA253015 to AA254536, AA254577 to AA254615, and AAY74253 to AAY75941
 CC represent novel *Neisseria meningitidis* and *N. gonorrhoeae* polynucleotides
 CC and polypeptides. AA254537 to AA254576 and AA254616 to AA25473 represent
 CC PCR primers used in the exemplification of the present invention. The
 CC polypeptides, the polynucleotides, antibodies and compositions of
 CC the invention can be used as vaccines, as diagnostic reagents, and as
 CC immunogenic compositions. The polypeptides can be used in the
 CC manufacture of medicaments for treating or preventing infection due to
 CC *Neisseria* bacteria (e.g. meningitis and septicemia), to detect the
 CC presence of *Neisseria* bacteria, or to raise antibodies. They may also
 CC be used to screen for agonists or antagonists, which may themselves
 CC have use as antibacterial agents. The polynucleotides of the invention
 CC may also be used in gene therapy protocols.
 CC
 SQ Sequence 897 BP; 223 A; 266 C; 227 G; 181 T; 0 other;


```

QY 121 cggctcgagacatctggcgttttaccttaagaagacgcgcgcacatcgcgcaat 180
DB 52534 CGGCTCGACATCTGGGGCTTTTACCTTTTAAAGAGACCGCGGCATCTGCGCAAT 52475
QY 181 atgcgctcagcagcagatgaatcccgaccccaaaagcgtaaaagcgttttgcgaaag 240
DB 52474 ATGCGGACGGGGGTTTGAACCCCGACCCCAAAACGGTAAAGCCGTTTGGGGAAAG 52415
QY 241 gcaaaagcggttggaaacttgcgcgcgtttttcagaaaacccggaagacatagaaca 300
DB 52414 GCAAAAGGGGGTTTGGAACTTGGCCCCGCTTTTGAAGAAACCGGAACATAGAAACA 52355
QY 301 atgttcaagcggttacacagcgcttggaacacatgacagcaggttttgacaacagaaag 360
DB 52354 ATGTTCAAGCGGTACACGCGTGGGAACATGTGACAGACGTTTGGACAAACACGAAGG 52295
QY 361 cgcctatcatcacgcgcgcacatcgcaactcagattggcgagcagctacacagcaag 420
DB 52294 CTGCTATTATCATCGCCGACATCGGACATGCTAGATTGGGGGACGCTACATCAGCCAG 52235
QY 421 cagcttcgcttcgcgcgcgcacatgtaacaacgcgcgaatacaagcgaatacaaa 480
DB 52234 CAGCTTCGCTTCGCGTGACCGCATGTACAAACCGCCAAATTAAGCCGATTAACAAA 52175
QY 481 atcatgcaagcggtgcaaggttgcggaagaaagaaacgcgcctacacagacatacaag 540
DB 52174 ATCATGCAAGCGGGGAGGGTTGCGCGCAAAAGGAAACCGCCCTACACGATACAGAG 52115
QY 541 gtcaacaacatcatcaaaacccctgcgttcgagcggaagaacatctgtctccgcgcaac 600
DB 52114 GTCAAAACAAATCATCAAAACCCCTGCGTTGCGCGCAAGCAACATCTCTGCGCACAC 52055
QY 601 gcccctccctcaagaagcggtggaagcgatggtggtatcttctcgcaaaccttcc 660
DB 52054 GTCCCTCCCTCCCAAGAGGCGGGGAAGCGATGCGTGTGATTTCTTGGCAAACTCTCC 51995
QY 661 tatcacatgacgctgcgcgcgaataatgacacgacgtaaaagcggtgaacacctgttttc 720
DB 51994 TATACATGACGCTGCGGCAAAATTTGGACACGTCAAAGGCGTAAACCTCTTTTTC 51935
QY 721 tgcgtcgaagcgctgcgcgcgcgaaggttgcattgacatccgcgcgcgcgcgcgcgc 780
DB 51934 TGCTGCGAAGCGCTGCTGCGGGAAGGTTGATTTGATTTGCAATCCGCCCTCCAAAGG 51875
QY 781 gaattgaagcggcgaacaaagcccatgagcgcgctgttcaacgcgaatgcgaatattg 840
DB 51874 GAATTGAAGCGGCAAAAGCCCATGATGCCCGCTGTTCAACCCCAATGCGAATATTGG 51815
QY 841 atacgcgcttccgacgacgacatctgttaataacgcgcgcgcgcgcgcgcgcgcgcgc 897
DB 51814 ATACGCGCTTTTCCGACGACGATCTGTTTATGTACAAACGCTTACAAAGCCGTTAA 51758

```

RESULT 7
ID AAF21612 standard; DNA: 349980 BP.

AAF21612;

DT 13-MAR-2001 (first entry)

DE Neisseria meningitidis B nucleotide sequence SEQ ID NO:113.

KW Neisseria meningitidis: Neisseria gonorrhoeae; immunogenic; vaccine;
diagnosis; antigen; detection; infection; gene therapy; antibacterial;

OS Neisseria meningitidis.

PN MO200066791-A1.

PD 09-NOV-2000.

```

XX 08-MAR-2000; 2000WO-US05928.
PF 30-APR-1999; 99US-0132068.
PR 08-OCT-1999; 99WO-US23573.
PR 28-FEB-2000; 2000GB-0004655.
XX (CHIR) CHIRON CORP.
PA (GENO-) INST GENOMIC RES.
XX
XX Piza M, Hickey E, Peterson J, Tettelin H, Venter JC, Maignani V,
PI Galeotti C, Mora M, Ratti G, Scarselli M, Scariato V, Rappuoli R,
PI Frazer CM, Grandi G;
XX WPI: 2000-647603/62.
XX
XX Neisseria meningitidis B full length genome sequence and open reading
PT frames are used to detect, treat and prevent Neisserial infections -
PS Claim 7; Appendix A: 692pp; English.
XX
XX The present invention describes the full length genome of
CC Neisseria meningitidis B (NMB). The sequences in AAF21544 and AAF21607
CC to AAF21613 represent fragments of the NMB genomic sequence, as the
CC sequence was too long to go in a record on its own it was split into 8
CC sequences which overlap each other at the beginning and end of each
CC sequence by 49980 bp (i.e., the last 49980 bp of AAF21544 is repeated at
CC the beginning of AAF21608, and so on). AAF21545 to AAF21588 encode the
CC Neisseria proteins given in AAB58550 to AAB58593, and AAF21589 to
CC AAF21606 represent PCR primers which are used in the exemplification of
CC the present invention. The NMB genome and fragments from it have
CC antibacterial activity, and can be used in vaccines and gene therapy.
CC Neisseria nucleic acids, proteins and/or antibodies which binds to the
CC proteins can be used in compositions for treating or preventing infection
CC due to Neisserial bacteria or as a diagnostic reagent for detecting the
CC presence of Neisserial bacteria or of antibodies raised to Neisserial
CC bacteria. Computers, computer memory, computer storage medium or computer
CC databases can be used in a search to identify open reading frames (ORFs)
CC or coding sequences within the NMB genome. The DNA sequences provide
CC further opportunities to find antigenic or immunogenic proteins which are
CC more effective in vaccines than the outer membrane proteins currently
CC used.
XX
XX
XX Sequence 349980 BP; 86473 A; 95646 C; 85908 G; 81953 T; 0 other;
SQ

```

Query Match 99.1%; Score 889; DB 21; Length 349980;
Best Local Similarity 99.4%; Pred. No. 1.4e-259;
Matches 892; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

```

QY 1 atgttcgtttaaatcagcgtgttccctcttgcgaacgcgcacatcctgttg 60
DB 89000 atgttcgtttaaatcagcgtgttccctcttgcgaacgcgcacatcctgttg 89059
QY 61 accgcctgtcacaatgcctccctcgtcgcgcgttctcgtcgaacgcgttggaac 120
DB 89060 accgcctgtcacaatgcctccctcgtcgcgcgttctcgtcgaacgcgttggaac 89119
QY 121 cggctcgacatctggcgttttaacctttaagaagacgcgcgcgcgcgcgcgcgcgcgc 180
DB 89120 cggctcgacatctggcgttttaacctttaagaagacgcgcgcgcgcgcgcgcgcgcgc 89179
QY 181 atgcgctcagcagcagatgaatcccgaccccaaaagcgtaaaagcgttttgcggaacg 240
DB 89180 atgcgctcagcagcagatgaatcccgaccccaaaagcgtaaaagcgttttgcggaacg 89239
QY 241 gcaaaagcggttggaaacttgcgcgcgttttccagaaaaacgcgaagacatagaaca 300
DB 89240 gcaaaagcggttggaaacttgcgcgcgttttccagaaaaacgcgaagacatagaaca 89299
QY 301 atgttcaagcggttacacagcgcttggaacacatgacagcaggtttgacaacagaaagg 360

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QY 541 gtcaacaatacacaagccctgctgctggaagcaaccatgctcgtccgacac 600
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 454311 gtcaacaatacacaagccctgctgctggaagcaaccatgctcgtccgacac 454370
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 601 gtccctccctcccaagaagcgagggaagcgatggtggtggttcttcgcaaacctgac 660
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 454371 gtccctccctcccaagaagcgagggaagcgatggtggtggttcttcgcaaacctgac 454430
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 661 tataccatgacgtctgctgcaagaattggaacagcgcaagcggaagacccgttttc 720
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 454431 tataccatgacgtctgctgcaagaattggaacagcgcaagcggaagacccgttttc 454490
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 721 tgctggaacgctgctgctgctggaagcgatggttgcattgcacatccgcccgtcaagg 780
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 454491 tgctggaacgctgctgctgctggaagcgatggttgcattgcacatccgcccgtcaagg 454550
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 781 gattggaacgctgcaagaagccatgatccgctggttcaaccgcaatgccaatttg 840
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 454551 gattggaacgctgcaagaagccatgatccgctggttcaaccgcaatgccaatttg 454610
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 841 atagcgctgttctcgacgagatctgttatagtacaacgctacaagaatgccaatg 897
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 454611 atagcgctgttctcgacgagatctgttatagtacaacgctacaagaatgccaatg 454667
CC |||||||||||||||||||||||||||||||||||||||||||||||||||

RESULT 9

AAZ53710
ID AAZ53710 standard; DNA; 866 BP.

AAZ53710;

21-MAR-2000 (first entry)

DE Neisseria meningitidis ORF 505 partial DNA sequence SEQ ID NO:1369.

XX Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine;

KW antigenic; diagnosis; immunogenic; infection; meningitis; septicemia;

XX antibacterial; gene therapy; ds.

OS Neisseria meningitidis.

XX

PN W09957280-A2.

XX

PD 11-NOV-1999.

XX

PE 30-APR-1999; 99MO-US09346.

XX

PR 01-MAY-1998; 98US-0083758.

XX

PR 31-JUL-1998; 98US-0094869.

XX

PR 02-SEP-1998; 98US-0098994.

XX

PR 02-SEP-1998; 98US-0099062.

XX

PR 09-OCT-1998; 98US-0103749.

XX

PR 09-OCT-1998; 98US-0103794.

XX

PR 25-FEB-1999; 99US-0121528.

XX

PA (CHIR) CHIRON CORP.

XX (GENO-) INST GENOMIC RES.

XX

PI Frazer C, Galeotti C, Grandi G, Hickey E, Masignani V, Mora M;

XX Petersen J, Pizzo M, Rappelli R, Ratti G, Scalato E, Sarselli M;

PI Tettelin H, Venter JC;

XX

DR MPI: 2000-062150/05.

XX

DR P-PSDB; AAY74948.

XX

PT Novel Neisserial polypeptides predicted to be useful antigens for

XX vaccines and diagnostics

XX

PS Claim 7; Page 744-745; 1453pp; English.

XX

XX AAZ53015 to AAZ54536, AAZ54577 to AAZ54615, and AAY74253 to AAY75941

CC represent novel Neisseria meningitidis and N. gonorrhoeae polynucleotides
CC and polypeptides. AAZ54537 to AAZ54576 and AAZ54616 to AAZ5473 represent
CC PCR primers used in the exemplification of the present invention. The
CC polypeptides, the polynucleotides, antibodies and compositions of
CC the invention can be used as vaccines, as diagnostic reagents, and as
CC immunogenic compositions. The polypeptides can be used in the
CC manufacture of medicaments for treating or preventing infection due to
CC Neisserial bacteria (e.g. meningitis and septicemia), to detect the
CC presence of Neisseria bacteria, or to raise antibodies. They may also
CC be used to screen for agonists or antagonists, which may themselves
CC have use as antibacterial agents. The polynucleotides of the invention
CC may also be used in gene therapy protocols.

CC Sequence 866 BP; 210 A; 260 C; 223 G; 172 T; 1 other;

Query Match 93.6%; Score 839.6; DB 21; Length 866;
Best Local Similarity 99.2%; Pred. No. 1e-245; 5; Indels 1; Gaps 1;
Matches 853; Conservative 1; Mismatches 5; Indels 1; Gaps 1;

QY 1 atgttcgtttacaattcagaagctgttcccttcgtggaacgcatgacatcctgttg 60
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 4 atgttcgtttacaattcagaagctgttcccttcgtggaacgcatgacatcctgttg 63
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 61 accgctcctgcaaatgctctcctgctgctgcttccctgctgacacgctgggaac 120
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 64 accgctcctgcaaatgctctcctgctgctgcttccctgctgacacgctgggaac 123
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 121 cggctcgacatctgctgcttaccctttaaagaagcgccgcatcgtcgcaat 180
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 124 cggctcgacatctgctgcttaccctttaaagaagcgccgcatcgtcgcaat 183
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 181 atgctgacgagcagcagatcccgaccccaagaagcgcttcttgcgaacg 240
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 184 atgctgacgagcagcagatcccgaccccaagaagcgcttcttgcgaacg 243
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 241 gcaaaagcgcttgggaactgcccccgcttcttgaagaacgggaataagaataa 300
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 244 gcaaaagcgcttgggaactgcccccgcttcttgaagaacgggaataagaataa 303
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 301 atgttcaagcggtacacgagctggaacatgacgacgcttgcgaacacgaaag 360
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 304 atgttcaagcggtacacgagctggaacatgacgacgcttgcgaacacgaaag 363
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 361 ctgctattcctacgacgacacgacgacgacgacgacgacgacgacgacgacgacg 420
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 364 ctgctattcctacgacgacacgacgacgacgacgacgacgacgacgacgacgacg 423
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 421 cagcttcgcttcccgctgacgacgacgacgacgacgacgacgacgacgacgacg 480
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 424 cagcttcgcttcccgctgacgacgacgacgacgacgacgacgacgacgacgacg 483
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 481 atcatgcaagcgagcgaggttcgacgacgacgacgacgacgacgacgacgacg 540
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 484 atcatgcaagcgagcgaggttcgacgacgacgacgacgacgacgacgacgacg 543
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 541 gtcaacaatacacaagccctgctgctggaagcaaccatgctcgtccgacac 600
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 544 gtcaacaatacacaagccctgctgctggaagcaaccatgctcgtccgacac 602
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 601 gtccctccctcccaagaagcgagggaagcgatggtggtggttcttcgcaaacctgac 660
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 603 gtccctccctcccaagaagcgagggaagcgatggtggtggttcttcgcaaacctgac 662
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 661 tataccatgacgtctgctgcaagaattggaacagcgcaagcggaagacccgttttc 720
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 663 tataccatgacgtctgctgcaagaattggaacagcgcaagcggaagacccgttttc 722
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 721 tgctggaacgctgctgctgctggaagcgatggttgcattgcacatccgcccgtcaagg 780
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
CC 723 tgctggaacgctgctgctgctggaagcgatggttgcattgcacatccgcccgtcaagg 782
CC |||||||||||||||||||||||||||||||||||||||||||||||||||
QY 781 gattggaacgctgcaagaagccatgatccgctggttcaaccgcaatgccaatttg 840
CC |||||||||||||||||||||||||||||||||||||||||||||||||||

|||||
Db 783 gaattgaacgagcaaaagcccaatgacggtgttcaaccgcaatgcccgaatattgg 842
Oy 841 atacgcggtttccgagca 860
|||||
Db 843 atacgcggtttccgagca 862

RESULT 10

AAZ1219
ID AAZ1219 standard: DNA: 894 BP.

AC AAZ1219;
XX

DT 08-OCT-1999 (first entry)

DE Neisseria gonorrhoeae complete ORF138 sequence.

KW Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine;
treatment; Neisseria infection; meningitis; septicemia; gonorrhea; ss.

OS Neisseria gonorrhoeae.

PN WO924578-A2.

PD 20-MAY-1999.

PF 09-OCT-1998: 98WO-1B01665.

PR 01-SEP-1998: 98GB-0019016.

PR 06-NOV-1997: 97GB-0023516.

PR 14-NOV-1997: 97GB-0024190.

PR 18-NOV-1997: 97GB-0024386.

PR 27-NOV-1997: 97GB-0025158.

PR 10-DEC-1997: 97GB-0026147.

PR 14-JAN-1998: 98GB-0000759.

PA (CHIR-) CHIRON SPA.

PI Grandi G, Maignani V, Piazza M, Rappunoli R, Scarlato V;

XX WPI: 1999-337407/27.

DR P-PSDB; AAY8784.

XX Proteins from Neisseria meningitidis and N. gonorrhoeae useful for

PT diagnosis, treatment and prevention of infection

XX Claim 9; Page 327-328; 524pp; English.

PS Nucleotide sequences AAZ11972-712358 represent open reading frames

CC (ORFs) of Neisseria meningitidis and N. gonorrhoeae which encode

CC antigenic proteins (see AAY38499-Y38944). The antigenic proteins, their

CC fragments, their nucleic acids and antibodies are used for diagnosis,

CC prevention (as vaccines) or treatment of Neisseria infections;

CC such as meningitis, septicemia and gonorrhea. Both organisms

CC are closely related. Fragments of the nucleic acids are useful

CC as hybridisation probes and antisense reagents.

XX Sequence 894 BP: 216 A; 270 C; 233 G; 175 T; 0 other;

XX Query Match 89.1%; Score 799.4; DB 20; Length 894;

XX Best Local Similarity 94.0%; Pred. No. 1.9e-233; Indels 3; Gaps 1;

XX Matches 843; Conservative 0; Mismatches 51;

Oy 1 atgttggttaacaatgaagctgttcccttgcgaacgcgcatgacatctgtg 60

Db 1 atgttggttaacaatgaagctgttcccttgcgaacgcgcatgacatctgtg 60

Oy 61 accgcctgtcaaatgctctccctgctgcggttctctgtcgaacgctggaaac 120

Db 61 accgcctgtcaaatgctctccctgctgcggttctctgtcgaacgctggaaac 120

Oy 121 cggctcgagacatctgacgttttaacctttaaaaggaaacgcgcgcacatcgcacat 180
Db 121 cggctcgagacatctgacgttttaacctttaaaaggaaacgcgcgcacatcgcacat 180
Oy 181 atgcgtcaagcagcatatccgcaccccaaaacggttcaaaagcgttttgcgaagc 240
Db 181 atgcgtcaagcaggtttgaaccccccgcacagcgttcaaaagcgttttgcgaagc 240
Oy 241 gcaaaagcggtttgaacacttgcgcgcgttttttaaaagcgggaagacaagaaca 300
Db 241 gcaaaagcggtttgaacacttgcgcgcgttttttaaaagcgggaagacaagaaca 300
Oy 301 atgttcaaaagcgttacaacgctggaacatgttgaacgagcgttttgaacaacgaa 360
Db 301 atgttcaaaagcgttacaacgctggaacatgttgaacgagcgttttgaacaacgaa 360
Oy 361 ctgattatcatcagcgcacatcgcgcagctacgatttggcggaagcgttaccatcagc 420
Db 361 ctgattatcatcagcgcacatcgcgcagctacgatttggcggaagcgttaccatcagc 420
Oy 421 cagcttcggttccgcgtgacgcgcatttacaacccgcgcgaatacgaatagaacaa 480
Db 421 cagcttcggttccgcgtgacgcgcatttacaacccgcgcgaatacgaatagaacaa 480
Oy 481 atcatgcaagcgagcgaggttgcgcgaaggaacacgcgcctaccagcatacaagg 540
Db 481 atcatgcaagcgagcgaggttgcgcgaaggaacacgcgcctaccagcatacaagg 540
Oy 541 gtcaaaacaaatcaaaagccctgcttgcgcgaaggaacacgcgcctaccagcatacaagg 600
Db 541 gtcaaaacaaatcaaaagccctgcttgcgcgaaggaacacgcgcctaccagcatacaagg 600
Oy 601 gtccctccctcccaagaaagcggaagcgtatgggttgaattcttcggaacacgtgcc 660
Db 601 gtccctccctcccaagaaagcggaagcgtatgggttgaattcttcggaacacgtgcc 660
Oy 661 tatacatgacgcttgcgcgaacaaatttgcacacgttcaaaagcgtgaaacacgttttc 720
Db 661 tatacatgacgcttgcgcgaacaaatttgcacacgttcaaaagcgtgaaacacgttttc 720
Oy 721 tgcgtgaaagcgttgcgcgaacaaatttgcacacgttcaaaagcgttcaaaagcgttgc 780
Db 721 tgcgtgaaagcgttgcgcgaacaaatttgcacacgttcaaaagcgttcaaaagcgttgc 780
Oy 781 gaattgaacgagcaaaagcccatgacgcgcgttgcgaacgcgcatatggaatgg 840
Db 781 gaattgaacgagcaaaagcccatgacgcgcgttgcgaacgcgcatatggaatgg 840
Oy 841 atacgcggtttccgagcaatctgtttatgtacaaaccgtataaagcgttaa 897
Db 841 atacgcggtttccgagcaatctgtttatgtacaaaccgtataaagcgttaa 897

RESULT 11

AAZ53709
ID AAZ53709 standard: DNA: 894 BP.

XX AAZ53709;

DT 21-MAR-2000 (first entry)

DE Neisseria gonorrhoeae ORF 505 partial DNA sequence SEQ ID NO:1367.

KW Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine;
antigenic; diagnosis; immunogenic; infection; meningitis; septicemia;

KW antibacterial; gene therapy; ds.

OS Neisseria gonorrhoeae.

PN WO957280-A2.

PD 11-NOV-1999.

XX

	Query Match	Similarity	98.1%	Score 799.4	DB 21	Length 894
	Best Local	Similarity	94.0%	Pred. No. 1.9e-233		
	Matches	843	Conservative	0	Mismatches 51	Indels 3
					Gaps	1
QY	1	atgttcglttaacaattcagacgctgcttccccctttggcgaaacgcgaatgcgaatccctcttg	60			
Db	1	atgttcglttaacaattcagacgctgcttccccctttggcgaaacgcgaatgcgaatccctcttg	60			
QY	61	accgccctgcataatgatgcctccctcgtcgtcgaccttcctgtctgcacaacgctgggaac	120			
Db	61	accgccctgcataatgatgcctccctcgtcgtcgaccttcctgtctgcacaacgctgggaac	120			
QY	121	cgcgtcgacatctbgcgttttacctttaagaagaacgcgcgcgcacatctgtccaat	180			
Db	121	cgcgtcgacatctbgcgttttacctttaagaagaacgcgcgcgcacatctgtccaat	180			
QY	181	atgcgtcaaggcagcatgatatccgaccaccaaaaagrgtccaagcgttttggcgaaacg	240			
Db	181	atgcgtcaaggcagcatgatatccgaccaccaaaaagrgtccaagcgttttggcgaaacg	240			
QY	241	gcaaaagcggtttggaacttgcccgcgcttttcagaaaaaccggaagacatagaataa	300			
Db	241	gcaaaagcggtttggaacttgcccgcgcttttcagaaaaaccggaagacatagaataa	300			
QY	301	atcttcaaaacggttaacgcgcgtgggaataatgtgaacgacttggacaacacgcgaagg	360			
Db	301	atcttcaaaacggttaacgcgcgtgggaataatgtgaacgacttggacaacgctgaagg	360			
QY	361	ctgcataatcacgcgcgaacatcgagcgtcagacatttggcggaagcttatcatcagcag	420			
Db	361	ctgcataatcacgcgcgaacatcgagcgtcagacatttggcggaagcttatcatcagcag	420			

Db	361	cgcgtgttcaatcaagccgcgaacttgcgcagctcagctcagatttggtgcgaagcgtacatcaagccag	420
Qy	421	cagcttcggttccgcgtcgaacgcgcaltgatacaaacgcgcgaataatcaaaagcgatagacaa	480
Db	421	cagcttcggttccgcgtcgaacgcgcaltgatacaaacgcgcgaataatcaaaagcgatagacaa	480
Qy	481	atcatcgagcgagcgagggttcgcggaagaagaaacgcgcctccacgaatacaagag	540
Db	481	atcatcgagcgagcgagggttcgcggaagaagaaacgcgcctccacgaatacaagag	540
Qy	541	gtcaacaacatcatcaaaagccctggttcgcggaagaacacacatgcttcctgcgcgaac	600
Db	541	gtcaacaacatcatcaaaagccctggttcgcggaagaacacacatgcttcctgcgcgaac	600
Qy	601	gtccctccctcccaagaagcgcgagggaagcgatlggtggtattcttcgcgaacctgc	660
Db	601	gtccctccctcccaagaagcgcgagggaagcgatlggtggtattcttcgcgaacctgc	660
Qy	661	tataccatgacgttcgcggaacaaatggcacaacgtcaaaagcgatgaaacccctgttttc	720
Db	658	tataccatgacgttcgcggaacaaatggcacaacgtcaaaagcgatgaaacccctgttttc	720
Qy	721	tgtctgcgaacgcctgctcgcgcgaacaaagtttcgatttgacacatccgcgcgtccaaag	780
Db	718	tgtctgcgaacgcctgctcgcgcgaacaaagtttcgatttgacacatccgcgcgtccaaag	777
Qy	781	gaattgaacgcgcgcgaacaaagcccatgatgcgcgcgtgttcaacgcgaatgcgaatatgtg	840
Db	778	gaattgaacgcgcgcgaacaaagcccatgatgcgcgcgtgttcaacgcgaatgcgaatatgtg	837
Qy	841	atacgcgcgttttcgcgcgcgaatctgttatgtatgataacgcgtatacaaatccgtaa	897
Db	838	atacgcgcgttttcgcgcgcgaatctgttatgtatgataacgcgtatacaaatccgtaa	894

RESULT 12

AA12216	ID	AA12216 standard; DNA; 369 BP.
XX	AC	AA12216;
XX	DT	08-OCT-1999 (first entry)
XX	DE	Neisseria meningitidis partial ORE138 sequence.
XX	KM	Neisseria meningitidis; Neisseria gonorrhoeae: antigen; vaccine;
XX	OS	Neisseria meningitidis; Neisseria infection; meningitis; septicaemia; gonorrhea; ss
XX	PN	Neisseria meningitidis.
XX	PD	W09924578-A2.
XX	PF	20-MAY-1999.
XX	PR	09-OCT-1998; 98WO-IB0165.
XX	PR	01-SEP-1998; 98GB-0019016.
XX	PR	06-NOV-1997; 97GB-0023516.
XX	PR	14-NOV-1997; 97GB-0024190.
XX	PR	18-NOV-1997; 97GB-0024386.
XX	PR	27-NOV-1997; 97GB-0025158.
XX	PR	10-DEC-1997; 97GB-0026147.
XX	PR	14-JAN-1998; 98GB-0000759.
XX	RA	(CHIR-) CHIRON SPA.
XX	PI	Grandi G, Masignani V, Pizza M, Rappuoli R, Scarlato V;
XX	XX	WPI; 1999-327407/27.
XX	XX	P-SDB; AAY38781.
PT	XX	Proteins from Neisseria meningitidis and N. gonorrhoeae useful for
		diagnosis, treatment and prevention of infection

XX Claim 9; Page 325; 524pp; English.

PS Nucleotide sequences AA211972-212358 represent open reading frames

CC (ORFs) of *Neisseria meningitidis* and *N. gonorrhoeae* which encode

CC antigenic proteins (see AY38499-138944). The antigenic proteins, their

CC fragments, their nucleic acids and antibodies are used for diagnosis,

CC prevention (as vaccines) or treatment of *Neisseria* infections,

CC such as meningitis, septicemia and gonorrhea. Both organisms

CC are closely related. Fragments of the nucleic acids are useful

CC as hybridisation probes and antisense reagents.

XX Sequence 369 BP; 84 A; 107 C; 93 G; 84 T; 1 other;

SQ

Query Match 40.2%; Score 360.6; DB 20; Length 369;

Best Local Similarity 98.4%; Pred. No. 8.2e-100;

Matches 363; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 atgttcgtttacaattcaggtgtttcccttttgagacacgcatgacatctgttg 60

DB 1 atgttcgtttacaattcaggtgtttcccttttgagacacgcatgacatctgttg 60

QY 61 accgacctgtcaaatgacctctcctgctgcgcttctctgtctgcacacgctggaaac 120

DB 61 accgacctgtcaaatgacctctcctgctgcgcttctctgtctgcacacgctggaaac 120

QY 121 cggctcggaacatctggtgtttacatttaagaagaacgacgacgcatcgctgcaat 180

DB 121 cggctcggaacatctggtgtttacatttaagaagaacgacgacgcatcgctgcaat 180

QY 121 cggctcggaacatctggtgtttacatttaagaagaacgacgacgcatcgctgcaat 180

DB 121 cggctcggaacatctggtgtttacatttaagaagaacgacgacgcatcgctgcaat 180

QY 181 atgctgaagcagcagatgaaatcccgaccccaaaacgltcaaacgcttttggagaacg 240

DB 181 atgctgaagcagcagatgaaatcccgaccccaaaacgltcaaacgcttttggagaacg 240

QY 241 gcaaaagcggttggacttgcctcccgctgttttcagaaaacggaagacatagaaca 300

DB 241 gcaaaagcggttggacttgcctcccgctgttttcagaaaacggaagacatagaaca 300

QY 301 atgttcaagcaggtacacgctgggaacatgtgcagcagcttttgacaaacggaaggg 360

DB 301 atgttcaagcaggtacacgctgggaacatgtgcagcagcttttgacaaacggaaggg 360

QY 361 ctgctatc 369

DB 361 ctgctatc 369

RESULT 13

AAA81391

ID AAA81391 standard; DNA; 369 BP.

XX AAA81391;

AC 04-DEC-2000 (first entry)

DT N. meningitidis MenB polynucleotide sequence ORF number 67.

XX

XX *Neisseria meningitidis*; *Neisseria gonorrhoeae*; genome; immunogenic;

KW antigen; vaccine; diagnosis; infection; antibacterial; identification;

KW *Meningococcus B*; MenB; ds.

XX

XX *Neisseria meningitidis*.

OS

XX WO200022430-A2.

PN

XX 20-APR-2000.

PD

XX 08-OCT-1999; 99WO-US23573.

PE

XX 09-OCT-1998; 98US-0103794.

PR 30-APR-1999; 99US-0132068.

XX

PA (CHIR) CHIRON CORP.

XX Frazier CM, Hickey E, Peterson J, Tetelin H, Venter JC;

PI Masignani V, Galeotti C, Mora M, Ratti G, Scarcelli M, Scarlato V;

PI Rapraio R, Pizsa M;

XX WPI; 2000-318079/27.

DR

PT Isolated nucleotide sequences of *Neisseria meningitidis* which can be

PT used in the diagnosis and treatment of *N. meningitidis* infection and

PT other *Neisseria* infections, for example, *N. gonorrhoea*.

XX

XX Disclosure; Page 216; 1760pp; English.

PS

XX The present invention describes methods of obtaining immunogenic

CC proteins from *Neisseria* genomic sequences. AAA81453 to AAA82414

CC represent specifically claimed *Neisseria meningitidis* genomic DNA

CC sequences; AAA81260 to AAA81303 and AAB25620 to AAB25663 represent

CC *Neisseria* DNA sequences and their corresponding proteins; AAA81254 to

CC AAA81259 and AAA81304 to AAA81321 represent PCR primers used in the

CC isolation of *Neisseria meningitidis* DNA sequences; and AAA81322 to

CC AAA81452 represent *Neisseria meningitidis* MenB polynucleotide ORF

CC sequences, which are all used in the exemplification of the present

CC invention. The nucleic acid sequences, protein sequences, and antibodies

CC against them, can be used in the manufacture (or in the manufacture of a

CC composition) for treating, preventing or diagnosing infection due to

CC medicinal bacteria. For example, some of the identified proteins could

CC be components of vaccines against *Meningococcus B*; against all serotypes;

CC and/or against all pathogenic *Neisseriae*. Identification of biological probes,

CC from the bacterium will also facilitate production of biological probes,

CC particularly organism specific probes. Attempts to make efficacious

CC *Meningococcus B* vaccines have also been tried but none have successfully

CC multivalent vaccines have also been tried but none have successfully

CC overcome antigenic variability. The provision of further, complete

CC sequences may provide an opportunity to identify secreted or surface

CC exposed proteins that may be presumed targets for the immune system and

CC which are not antigenically variable or at least more conserved than

CC other more variable regions.

XX

SQ Sequence 369 BP; 84 A; 107 C; 93 G; 84 T; 1 other;

Query Match 40.2%; Score 360.6; DB 21; Length 369;

Best Local Similarity 98.4%; Pred. No. 8.2e-100;

Matches 363; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 atgttcgtttacaattcaggtgtttcccttttgagacacgcatgacatctgttg 60

DB 1 atgttcgtttacaattcaggtgtttcccttttgagacacgcatgacatctgttg 60

QY 61 accgacctgtcaaatgacctctcctgctgcgcttctctgtctgcacacgctggaaac 120

DB 61 accgacctgtcaaatgacctctcctgctgcgcttctctgtctgcacacgctggaaac 120

QY 121 cggctcggaacatctggtgtttacatttaagaagaacgacgacgcatcgctgcaat 180

DB 121 cggctcggaacatctggtgtttacatttaagaagaacgacgacgcatcgctgcaat 180

QY 181 atgctgaagcagcagatgaaatcccgaccccaaaacgltcaaacgcttttggagaacg 240

DB 181 atgctgaagcagcagatgaaatcccgaccccaaaacgltcaaacgcttttggagaacg 240

QY 241 gcaaaagcggttggacttgcctcccgctgttttcagaaaacggaagacatagaaca 300

DB 241 gcaaaagcggttggacttgcctcccgctgttttcagaaaacggaagacatagaaca 300

QY 301 atgttcaagcaggtacacgctgggaacatgtgcagcagcttttgacaaacggaaggg 360

DB 301 atgttcaagcaggtacacgctgggaacatgtgcagcagcttttgacaaacggaaggg 360

QY 361 ctgctatc 369

DB 361 ctgctatc 369

Db 361 ctgctatc 369

RESULT 14

AAAI0594
ID AAAI0594 standard; DNA; 10732 BP.

XX AAAI0594;

XX 29-JUN-2000 (first entry)

XX Gene encoding a subunit of cellulose synthase.

XX Cellulose synthase; cellulose production; increase yield; ds.

XX Vigna angularis.

XX JP2000060568-A.

XX 29-FEB-2000.

XX 26-AUG-1998; 98JP-0239998.

XX 26-AUG-1998; 98JP-0239998.

XX (MIZU/) MIZUNO K.

XX (OUIP) OUI PAPER CO.

XX WPI; 2000-342371/30.

XX P-PSDB; AAY85179.

XX A gene encoding a cellulose synthetic equipment - for the improvement

XX in the amount of cellulose synthesised in a plant body

XX Claim 2; Page 14-21; 32pp; Japanese.

XX This sequence represents a gene encoding a subunit of the cellulose

XX synthase complex of Vigna angularis. The invention relates to subunits of

XX cellulose synthetic equipment, that can be used to increase the amount of

XX cellulose synthesised by a plant. The proteins and genes encoding them

XX can also be used to improve the properties of the cellulose being

XX produced by a plant.

XX Sequence 10732 BP; 3149 A; 1212 C; 2074 G; 2046 T; 2251 other;

XX

XX

XX

XX

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XX

XX

QY 506 gcaaaagaaacccgcgcctaccacacatacagggtgaacaaatcatcaaacgctcgc 565

Db 9834 vaaarignsvaasnashshashshsrarargysrvahsasthrgnasmrncyschc 9893

QY 566 gtccggcgaagcaacatcgtcctccgccacacgctccctccctcaagaagcgcg 625

Db 9894 yssrcysrassrsrvavaasnrsraagygasaanaasarysargrsrgnqasaryssr 9953

QY 626 aagcgatgggtgattcttcggcaacctgcctacacatgacgtggcgcaaat 685

Db 9954 yssgvaagargraavaaslyrasrstrgnsygyargasharlyrsaasngylrth 10013

QY 686 tg 687

Db 10014 rg 10015

RESULT 15

AAV40622
ID AAV40622 standard; cDNA; 861 BP.

XX AAV40622;

XX 26-OCT-1998 (first entry)

XX DN722_2 cDNA clone.

XX Human fetal brain cDNA library; full-length clone; gene therapy; ss.

XX Homo. sapiens.

XX Key Location/Qualifiers

XX CDS 437..826

XX /tag= a

XX /product= "DN722_2 protein"

XX MO9830584-AZ.

XX 16-JUL-1998.

XX 09-JAN-1998; 98WO-US000537.

XX 28-MAY-1997; 97US-0864517.

XX 09-JAN-1997; 97US-0780890.

XX (GENY) GENETICS INST INC.

XX Jacobs K, Lavallie ER, Mccoy JM, Werberg D, Racie LA;

XX Spaulding V, Treacy M;

XX WPI; 1998-399060/34.

XX P-PSDB; AAW69949.

XX Polynucleotide and protein of clone DN722_2 - useful for, e.g.

XX treating auto-immune diseases, nervous system disorders and

XX osteoarthritis

XX Claim 14; Page 40; 49pp; English.

XX

XX

XX

QY 506 gcaaaagaaacccgcgcctaccacacatacagggtgaacaaatcatcaaacgctcgc 565

Db 9834 vaaarignsvaasnashshashshsrarargysrvahsasthrgnasmrncyschc 9893

QY 566 gtccggcgaagcaacatcgtcctccgccacacgctccctccctcaagaagcgcg 625

Db 9894 yssrcysrassrsrvavaasnrsraagygasaanaasarysargrsrgnqasaryssr 9953

QY 626 aagcgatgggtgattcttcggcaacctgcctacacatgacgtggcgcaaat 685

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QY 506 gcaaaagaaacccgcgcctaccacacatacagggtgaacaaatcatcaaacgctcgc 565

Db 9834 vaaarignsvaasnashshashshsrarargysrvahsasthrgnasmrncyschc 9893

QY 566 gtccggcgaagcaacatcgtcctccgccacacgctccctccctcaagaagcgcg 625

Db 9894 yssrcysrassrsrvavaasnrsraagygasaanaasarysargrsrgnqasaryssr 9953

QY 626 aagcgatgggtgattcttcggcaacctgcctacacatgacgtggcgcaaat 685

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Db 9894 yssrcysrassrsrvavaasnrsraagygasaanaasarysargrsrgnqasaryssr 9953

QY 626 aagcgatgggtgattcttcggcaacctgcctacacatgacgtggcgcaaat 685

Db 9954 yssgvaagargraavaaslyrasrstrgnsygyargasharlyrsaasngylrth 10013

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QY 506 gcaaaagaaacccgcgcctaccacacatacagggtgaacaaatcatcaaacgctcgc 565

Db 9834 vaaarignsvaasnashshashshsrarargysrvahsasthrgnasmrncyschc 9893

QY 566 gtccggcgaagcaacatcgtcctccgccacacgctccctccctcaagaagcgcg 625

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QY 626 aagcgatgggtgattcttcggcaacctgcctacacatgacgtggcgcaaat 685

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QY 506 gcaaaagaaacccgcgcctaccacacatacagggtgaacaaatcatcaaacgctcgc 565

Db 9834 vaaarignsvaasnashshashshsrarargysrvahsasthrgnasmrncyschc 9893

QY 566 gtccggcgaagcaacatcgtcctccgccacacgctccctccctcaagaagcgcg 625

Db 9894 yssrcysrassrsrvavaasnrsraagygasaanaasarysargrsrgnqasaryssr 9953

QY 626 aagcgatgggtgattcttcggcaacctgcctacacatgacgtggcgcaaat 685

Db 9954 yssgvaagargraavaaslyrasrstrgnsygyargasharlyrsaasngylrth 10013

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XX /product= "DN722_2 protein"

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XX (GENY) GENETICS INST INC.

XX Jacobs K, Lavallie ER, Mccoy JM, Werberg D, Racie LA;

XX Spaulding V, Treacy M;

XX WPI; 1998-399060/34.

XX P-PSDB; AAW69949.

XX Polynucleotide and protein of clone DN722_2 - useful for, e.g.

XX treating auto-immune diseases, nervous system disorders and

XX osteoarthritis

XX Claim 14; Page 40; 49pp; English.

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QY 506 gcaaaagaaacccgcgcctaccacacatacagggtgaacaaatcatcaaacgctcgc 565

Db 9834 vaaarignsvaasnashshashshsrarargysrvahsasthrgnasmrncyschc 9893

QY 566 gtccggcgaagcaacatcgtcctccgccacacgctccctccctcaagaagcgcg 625

Db 9894 yssrcysrassrsrvavaasnrsraagygasaanaasarysargrsrgnqasaryssr 9953

QY 626 aagcgatgggtgattcttcggcaacctgcctacacatgacgtggcgcaaat 685

Db 9954 yssgvaagargraavaaslyrasrstrgnsygyargasharlyrsaasngylrth 10013

QY 686 tg 687

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XX AAV40622;

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XX Human fetal brain cDNA library; full-length clone; gene therapy; ss.

XX Homo. sapiens.

XX Key Location/Qualifiers

XX CDS 437..826

XX /tag= a

XX /product= "DN722_2 protein"

XX MO9830584-AZ.

XX 16-JUL-1998.

XX 09-JAN-1998; 98WO-US000537.

CC particularly organism-specific probes. Attempts to make efficacious
 CC Meningococcus B vaccines have failed mainly due to antigen tolerance.
 CC Multivalent vaccines have also been tried but none have successfully
 CC overcome antigenic variability. The provision of further, complete
 CC sequences may provide an opportunity to identify secreted or surface
 CC exposed proteins that may be presumed targets for the immune system and
 CC which are not antigenically variable or at least more conserved than
 CC other more variable regions.

XX Sequence 65632 BP: 16704 A; 16327 C; 15474 G; 17126 T; 1 other;

Query Match

Best Local Similarity 44.3%; Score 36.4; DB 21; Length 65632;
 Matches 148; Conservative 0; Mismatches 186; Indels 0; Gaps 0;

QY 477 caaatatcagcagcgaggttcgcgcgcaaaagaaaccgctaccagatca 536
 DB 18697 CAAACTTTTGACATAGCGACGCGTAACCTGGGCTTCACTGCCAGCAAAACCCA 18638
 QY 537 aggggtcaacaacatcaatcaagccctgcgttcgagcgaaacacatcgtctccga 596
 DB 18637 AGCGACGCAAAAGACATCATCAATCAAAAGCGCTGTGTCGACGACAAAGCGCGACG 18578
 QY 597 ccaagtcctccctccctcaagagcgagggagagcgataggttgattcttcgcgaacc 656
 DB 18577 CCTCCGCTGTCGCGCCCGGAGCGGTGTCAACACATCAACAAATTTCAAGTGTGCA 18518
 QY 657 tgcctataccatgacgctgcgcgcaaaattgcaacgctcaagcgctgaaacccgtt 716
 DB 18517 GAAGCGCATTTGAACTGTGCCGAGCAAAATGCCCAACTGTTCGCTGCCAAGACCAA 18458
 QY 717 ttctgcgcgagagcctgcgttcgcgcgaaagtttcgattgacatcgcgccgttca 776
 DB 18457 TTGCGCCGCGGACGCGGCGGTCGTCAAAGCGGTTTATGTAAAGACCAACGCGCA 18398
 QY 777 aggggaattgaagcgcaagaagcccatgatgac 810
 DB 18397 GACGCGGCTGAATGCCACTACTGCGAATAAAC 18364

RESULT 21

AAAF21544 ID AAF21544 standard; DNA: 349980 BP.

AC AAF21544;

DT 13-MAR-2001 (first entry)

DE Neisseria meningitidis B nucleotide sequence SEQ ID NO:1.

KW Neisseria meningitidis; Neisseria gonorrhoeae; immunogenic; vaccine;
 diagnosis; antigen; detection; infection; gene therapy; antibacterial;

OS Neisseria meningitidis.

PN WO200066791-A1.

PD 09-NOV-2000.

PF 08-MAR-2000; 2000MO-US05928.

PR 30-APR-1999; 99US-0132068.

PR 08-OCT-1999; 99MO-US23573.

PR 28-FEB-2000; 2000GB-0004695.

PA (CHIR) CHIRON CORP.

PA (GENO-) INST GENOMIC RES.

PI Pizza M, Hickey E, Peterson J, Tettelin H, Venter JC, Masiyana V,
 PI Galeotti C, Mora M, Ratti G, Scarselli M, Scariato V, Rappelli R,
 PI Frazer CM, Grandi G;

XX WPI: 2000-647603/62.

DR Neisseria meningitidis B full length genome sequence and open reading
 frames are used to detect, treat and prevent Neisserial infections -

PS Claim 7; Appendix A: 692pp; English.

XX The present invention describes the full length genome of
 CC Neisseria meningitidis B (NMB). The sequences in AAF21544 and AAF21607
 CC to AAF21613 represent fragments of the NMB genomic sequence, as the
 CC sequence was too long to go in a record on its own it was split into 8
 CC sequences which overlap each other at the beginning and end of each
 CC sequence by 49980 bp (i.e. the last 49980 bp of AAF21544 is repeated at
 CC the beginning of AAF21607, the last 49980 bp of AAF21607 are repeated at
 CC the beginning of AAF21608, and so on). AAF21545 to AAF21588 encode the
 CC Neisseria proteins given in AAB58550 to AAB58593, and AAF21589 to
 CC AAF21606 represent PCR primers which are used in the exemplification of
 CC the present invention. The NMB genome and fragments from it have
 CC antibacterial activity, and can be used in vaccines and gene therapy.
 CC Neisseria nucleic acids, proteins and/or antibodies which binds to the
 CC proteins can be used in compositions for treating or preventing infection
 CC due to Neisserial bacteria or as a diagnostic reagent for detecting the
 CC presence of Neisserial bacteria or of antibodies raised to Neisserial
 CC bacteria. Computers, computer memory, computer storage medium or computer
 CC databases can be used in a search to identify open reading frames (ORFs)
 CC or coding sequences within the NMB genome. The DNA sequences provide
 CC further opportunities to find antigenic or immunogenic proteins which are
 CC more effective in vaccines than the outer membrane proteins currently
 CC used.

XX Sequence 349980 BP: 83241 A; 85091 C; 95206 G; 86442 T; 0 other;

Query Match

Best Local Similarity 44.3%; Score 36.4; DB 21; Length 349980;
 Matches 148; Conservative 0; Mismatches 186; Indels 0; Gaps 0;

QY 477 caaatatcagcagcgaggttcgcgcgcaaaagaaaccgctaccagatca 536
 DB 115461 caaatcttgacactacgcaagcggttaacgtggtctcaactcgcgcaaaaacca 115520
 QY 537 aggggtcaacaacatcaatcaagccctgcgttcgcgcgaaagcaaccatgctctccga 596
 DB 115521 aggcagcaagaacatcaatcaatcaagcgctgcttgatgacgcaaaagccgcgaacg 115580
 QY 597 ccaagtcctccctccctcaagagcgagggagcgataggttgattcttcgcgaacc 656
 DB 115581 cctgcgcctgctgcgcgcgagcggtgtcaaacacatcgacattcaagtcgtgca 115640
 QY 657 tgcctataccatgacgctgcgcgcaaaattgcaacgctcaagcgctgcaaaaccgtt 716
 DB 115641 gaagcgcatltygaacctgcgcgcaagatcgcggaagtgcttcgctcgaacagaa 115700
 QY 717 ttctgcgcgagagcctgcgttcgcgcgaaagtttcgattgacatcgcgccgttca 776
 DB 115701 ttgcgcgcgcaagcgagcgcggttcaaaagccggtttatgttaaaagcacaagggca 115760
 QY 777 aggggaattgaagcgcaagaagcccatgatgac 810
 DB 115761 gacgcgctgaaatgacactactcgaaaaaacc 115794

RESULT 22

AAAB81490 ID AAAB81490 standard; DNA: 1437668 BP.

AC AAAB81490;

DT 04-DEC-2000 (first entry)

DE N. meningitidis B full length genome DNA sequence SEQ ID NO:1068.

Vaccine contg. poly. peptide with exposed antigenic determinants

(SMIK) SMITHKLINE BEECHAM CORP


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FT      /note= "encoded protein shown in AAW72187"
FT      /tag= ad
FT      /product= "ORF#22a protein"
FT      /note= "encoded protein shown in AAW72226"
FT      /tag= ae
FT      /product= "ORF#22b protein"
FT      /note= "encoded protein shown in AAW72227"
FT      /tag= af
FT      /product= "ORF#23 protein"
FT      /note= "encoded protein shown in AAW72188"
FT      /tag= ag
FT      /product= "ORF#24 protein"
FT      /note= "encoded protein shown in AAW72189"
FT      /tag= ah
FT      /product= "ORF#25 protein"
FT      /note= "encoded protein shown in AAW72190"
FT      /tag= ai
FT      /product= "ORF#26 protein"
FT      /note= "encoded protein shown in AAW72191"
FT      /tag= aj
FT      /product= "ORF#27 protein"
FT      /note= "encoded protein shown in AAW72192"
FT      /tag= ak
FT      /product= "ORF#28 protein"
FT      /note= "encoded protein shown in AAW72193"
FT      /tag= al
FT      /product= "ORF#29 protein"
FT      /note= "encoded protein shown in AAW72194"
FT      /tag= am
FT      /product= "ORF#30 protein"
FT      /note= "encoded protein shown in AAW72195"
FT      /tag= an
FT      /product= "ORF#31 protein"
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FT      /product= "ORF#33 protein"
FT      /note= "encoded protein shown in AAW72198"
FT      /tag= aq
FT      /product= "ORF#34 protein"
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FT      /product= "ORF#35 protein"
FT      /note= "encoded protein shown in AAW72200"
FT      /tag= as
FT      /product= "ORF#36 protein"
FT      /note= "encoded protein shown in AAW72201"
FT      /tag= at

```

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Query Match      4 0%; Score 35.8; DB 19; Length 117213;
Best Local Similarity 61.1%; Pred. No. 13;
Matches 58; Conservative 0; Mismatches 37; Indels 0; Gaps 0;

```

```

Oy      85 ctgctccgcttctctgctgcacacgctggaaaccgcgcgcgttacc 144
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      88454 ccgagtcgcggttcccaactcacccgcagcgagtcgcgcgttacc 88513
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Oy      145 ctttaaggaagacgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 179
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      88514 cagcgagcagcgagcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 88548

RESULT 30
AAH01679/c
ID      AAH01679 standard; DNA: 1401 BP.
AC      AAH01679;
XX
XX      24-JUL-2001 (first entry)
XX
XX      Bordetella pertussis nucleotide sequence SEQ ID NO:1672.
DE
XX
XX      Species specific; genus specific; family specific; probe; detection;
KW      identification; algal; archaeal; bacterial; fungal; parasitical;
KW      microorganism; diagnosis; translation elongation factor Tu; toxin;
KW      translation elongation factor G; RecA recombinase; resistance;
KW      catalytic subunit of proton-translocating ATPase; antimicrobial;
KW      vaccine; primer; ds.
XX
XX      Bordetella pertussis.
OS
XX      W0200123604-A2.
PN
XX      05-APR-2001.
PD
XX      28-SEP-2000; 2000MO-CA01150.
PE
XX      28-SEP-1999; 99CA-2283458.
PR      19-MAY-2000; 2000CA-2307010.
XX
XX      (INFE-) INFECTIO DIAGNOSTIC (IDI) INC.
PA
PI      Bergeron MG, Boissinot M, Huletsky A, Menard C, Ouellette M;
PI      Picard FJ, Roy PH;
XX
XX      WPI; 2001-245006/25.
DR
XX
XX      Nucleic acid sequences are used to generate universal probes and
PT      primers which can be used to identify and detect the presence of algal,
PT      archaeal, bacterial, fungal and parasitological species in a test sample.
XX
XX      Disclosure; Page 1269-1270; 1580pp; English.
XX
XX
XX      The present invention describes a method for generating a repertoire of
CC      nucleic acids of tuf, fus, atpD and/or recA genes from which probes
CC      and/or primers are derived. The method comprises amplifying the nucleic
CC      acids of determined algal, archaeal, bacterial, fungal and parasitological
CC      species with a combination of defined primer pairs. The method can be
CC      used for producing probes and/or primers for detecting one or more
CC      related microorganisms e.g. algae, archaea, bacteria, fungi and
CC      parasites, for universal detection and for specific and ubiquitous
CC      detection and identification of an algal, archaeal, bacterial, fungal
CC      and parasitological species, genus, family and group. A nucleic acid (I)
CC      obtained using the method of the invention can be used for the universal
CC      detection of any bacterium, fungus or parasite in a sample and for the
CC      detection of at least one antimicrobial agent resistance gene or at
CC      least one toxin gene. hexA nucleic acids are used for the specific and
CC      ubiquitous detection and for identification of Streptococcus pneumoniae.
CC      (I) can be used to design a therapeutic agent which is effective against
CC      microorganisms. Microbial species or genus or family or phylum or group
CC      which can be detected include Abiotrophia adiacens, Bordetella sp.,
CC      Corynebacterium sp., Enterobacteriaceae group, Escherichia coli,
CC      Mycobacteriaceae family, Pseudomonas group, Streptococcus sp.,
CC      Neisseria gonorrhoeae and Staphylococcus sp.. Using DNA based tests
CC      provides faster results than substrate specificity tests as results can
CC      be determined in an hour and improved accuracy is also achieved.

```


XX The present invention describes methods of obtaining immunogenic
 CC proteins from *Neisseria* genomic sequences. AAB1453 to AAB82414
 CC represent specifically claimed *Neisseria meningitidis* genomic DNA
 CC sequences: AAB1260 to AAB1303 and AAB25620 to AAB25663 represent
 CC *Neisseria* DNA sequences and their corresponding proteins; AAB1254 to
 CC AAB1259 and AAB1304 to AAB1321 represent PCR primers used in the
 CC isolation of *Neisseria meningitidis* DNA sequences; and AAB1322 to
 CC AAB1452 represent *Neisseria meningitidis* MenB polynucleotide ORF
 CC sequences, which are all used in the exemplification of the present
 CC invention. The nucleic acid sequences, protein sequences, and antibodies
 CC against them, can be used in the manufacture of a composition. The
 CC composition can be used as a medicament (or in the manufacture of a
 CC medicament) for treating, preventing or diagnosing infection due to
 CC *Neisseria* bacteria. For example, some of the identified proteins could
 CC be components of vaccines against *Meningococcus B*; against all serotypes;
 CC and/or against all pathogenic *Neisseriae*. Identification of sequences
 CC from the bacterium will also facilitate production of biological probes,
 CC particularly organism-specific probes. Attempts to make efficacious
 CC *Meningococcus B* vaccines have failed mainly due to antigen tolerance.
 CC Multivalent vaccines have also been tried but none have successfully
 CC overcome antigenic variability. The provision of further, complete
 CC sequences may provide an opportunity to identify secreted or surface
 CC exposed proteins that may be presumed targets for the immune system and
 CC which are not antigenically variable or at least more conserved than
 CC other more variable regions.

XX Sequence 102634 BP; 23871 A; 24828 C; 27888 G; 26042 T; 5 other;

Query Match 3.9%; Score 34.8; DB 21; Length 102634;
 Best Local Similarity 50.6%; Pred. No. 24;
 Matches 84; Conservative 0; Mismatches 82; Indels 0; Gaps 0;

QY 477 caaatcatcagcagcgaggttcgcygcaaaagaaacccgcctaccagcataca 536
 DB 49247 CGAATACGCCCTTGACAGCCTTCGGGCGCTTCTTGGAATATATCCGCTTACCGTAGAA 49188
 QY 537 aggggtcaacaacaatcaagaagccctgcttgcggcggaacacatcgtctgcgga 596
 DB 49187 TGCTGTAGACAGCGAACAACACATACCGCGCGCTTGTAGGTTTCTCCGACCGC 49128
 QY 597 ccaggtccctccctcaagaagcggaagcgatagtgat 642
 DB 49127 GCCCTTGTGTAGCGGAAAAAGCCCGCATGACGAAGCGGTCCAT 49082

RESULT 35
 AAF21609/c
 ID AAF21609 standard; DNA; 349980 BP.

XX AAF21609;
 AC
 DT 13-MAR-2001 (first entry)

DE *Neisseria meningitidis* B nucleotide sequence SEQ ID NO.110.

XX *Neisseria meningitidis*; *Neisseria gonorrhoeae*; immunogenic; vaccine;
 KW diagnosis; antigen; detection; infection; gene therapy; antibacterial;
 ds.

XX *Neisseria meningitidis*.

XX MO20006791-A1.

XX 09-NOV-2000.

XX 08-MAR-2000; 2000MO-US05928.

XX 30-APR-1999; 99US-0132068.

XX 08-OCT-1999; 99MO-US23573.
 XX 28-FEB-2000; 2000GB-0004695.

PA (CHIR) CHIRON CORP.
 PA (GENO-) INST GENOMIC RES.

PI Pizsa M, Hickey E, Peterson J, Tetrelin H, Venter JC, Masignani V;
 PI Galeotti C, Mora M, Ratti G, Scarselli M, Scariato V, Rappuoli R;
 PI Frazer CM, Grandi G;

XX WPI; 2000-647603/62.

PT *Neisseria meningitidis* B full length genome sequence and open reading
 PT frames are used to detect, treat and prevent *Neisseria* infections -
 PS Claim 7: Appendix A; 692pp; English.

XX The present invention describes the full length genome of
 CC *Neisseria meningitidis* B (NMB). The sequences in AAF21544 and AAF21607
 CC to AAF21613 represent fragments of the NMB genomic sequence, as the
 CC sequences were too long to go in a record on its own. It was split into 8
 CC sequences which overlap each other at the beginning and end of each
 CC sequence by 49980 bp (i.e., the last 49980 bp of AAF21544 is repeated at
 CC the beginning of AAF21607, the last 49980 bp of AAF21607 are repeated at
 CC the beginning of AAF21608, and so on). AAF21545 to AAF21588 encode the
 CC *Neisseria* proteins given in AAB58550 to AAB58593, and AAF21589 to
 CC AAF21606 represent PCR primers which are used in the exemplification of
 CC the present invention. The NMB genome and fragments from it have
 CC antibacterial activity, and can be used in vaccines and gene therapy.
 CC *Neisseria* nucleic acids, proteins and/or antibodies which binds to the
 CC proteins can be used in compositions for treating or preventing infection
 CC due to *Neisseria* bacteria or of antibodies raised to *Neisseria*
 CC presence of *Neisseria* bacteria or of antibodies raised to *Neisseria*
 CC bacteria. Computers, computer memory, computer storage medium or computer
 CC databases can be used in a search to identify open reading frames (ORFs)
 CC or coding sequences within the NMB genome. The DNA sequences provide
 CC further opportunities to find antigenic or immunogenic proteins which are
 CC more effective in vaccines than the outer membrane proteins currently
 CC used.

XX Sequence 349980 BP; 81351 A; 86755 C; 95584 G; 86290 T; 0 other;

Query Match 3.9%; Score 34.8; DB 21; Length 349980;
 Best Local Similarity 50.6%; Pred. No. 42;
 Matches 84; Conservative 0; Mismatches 82; Indels 0; Gaps 0;

QY 477 caaatcatcagcagcgaggttcgcygcaaaagaaacccgcctaccagcataca 536
 DB 152957 CGAATACGCCCTTGACAGCCTTCGGGCGCTTCTTGGAATATATCCGCTTACCGTAGAA 152898
 QY 537 aggggtcaacaacaatcaagaagccctgcttgcggcggaacacatcgtctgcgga 596
 DB 152897 TGCTGTAGACAGCGAACAACACATACCGCGCGCTTGTAGGTTTCTCCGACCGC 152838
 QY 597 ccaggtccctccctcaagaagcggaagcgatagtgat 642
 DB 152837 GCCCTTGTGTAGCGGAAAAAGCCCGCATGACGAAGCGGTCCAT 152792

RESULT 36
 AAB1490/c
 ID AAB1490 standard; DNA; 1437668 BP.

XX AAB1490;

XX 04-DEC-2000 (first entry)

DE *N. meningitidis* B full length genome DNA sequence SEQ ID NO.1068.

XX *Neisseria meningitidis*; *Neisseria gonorrhoeae*; genome; immunogenic;
 KW antigen; vaccine; diagnosis; infection; antibacterial; identification;
 KW *Meningococcus B*; MenB; ds.

XX *Neisseria meningitidis*.

PN WO200022430-A2.
XX 20-APR-2000.
PD
XX 08-OCT-1999; 99WO-US23573.
PF
XX 09-OCT-1998; 98US-0103794.
PR 30-APR-1999; 99US-0132068.
XX
PA (CHIR) CHIRON CORP.
PI Frazer CM, Hickey E, Peterson J, Tettein H, Venter JC,
PI Masignani V, Galeotti C, Mora M, Ratti G, Scarselli M, Scarlato V,
PI Rappuoli R, Pizza M.
PI WPI; 2000-318079/27.
DR
XX
XX Isolated nucleotide sequences of *Neisseria meningitidis* which can be
PT used in the diagnosis and treatment of *N. meningitidis* infection and
PT other *Neisseria* infections, for example, *N. gonorrhoea*.
XX
XX Claim 7; Page 866-1272; 1760pp; English.
PS
XX
XX The present invention describes methods of obtaining immunogenic
CC proteins from *Neisseria* genomic sequences. AAA81453 to AAA82414
CC represent specifically claimed *Neisseria meningitidis* genomic DNA
CC sequences; AAA81260 to AAA81303 and AAB25620 to AAB25663 represent
CC *Neisseria* DNA sequences and their corresponding proteins; AAA81254 to
CC AAA81259 and AAA81304 to AAA81321 represent PCR primers used in the
CC isolation of *Neisseria meningitidis* DNA sequences; and AAA81322 to
CC AAA81452 represent *Neisseria meningitidis* MenB polynucleotide ORF
CC sequences, which are all used in the exemplification of the present
CC invention. The nucleic acid sequences, protein sequences, and antibodies
CC against them, can be used in the manufacture of a composition. The
CC composition can be used as a medicament (or in the manufacture of a
CC medicament) for treating, preventing or diagnosing infection due to
CC *Neisseria* bacteria. For example, some of the identified proteins could
CC be components of vaccines against *Neisseria* B; against all serotypes;
CC and/or against all pathogenic *Neisseria*. Identification of sequences
CC from the bacterium will also facilitate production of biological probes,
CC particularly organism-specific probes. Attempts to make efficacious
CC *Meningococcus* B vaccines have failed mainly due to antigen tolerance.
CC Multivalent vaccines have also been tried but none have successfully
CC overcome antigenic variability. The provision of further, complete
CC sequences may provide an opportunity to identify secreted or surface
CC exposed proteins that may be presumed targets for the immune system and
CC which are not antigenically variable or at least more conserved than
CC other more variable regions.
XX
XX Sequence 1437668 BP; 344338 A; 353206 C; 385074 G; 355045 T; 5 other;
SQ
Query Match 3.9%; Score 34.8; DB 21; Length 1437668;
Best Local Similarity 50.6%; Pred. No. 77;
Matches 84; Conservative 0; Mismatches 82; Indels 0; Gaps 0;
QY 477 caaatatcatcagcgagcggttcgagcaagaagaaacgcgcgtaccagcatata 536
DB 1052956 CGAATACGGCGCTTCGCGGCTTCGCGCATTAATGCGCGTACCGGTAGGAA 1052897
QY 537 aggggtcaacaataatcaaacccctgcgttcggcgagcaacatcgtctctccga 596
DB 1052896 TCGTGTTCAGACAGCGGAAACAAACACATACCGCGGCTTTAGGTTTCGTCGCAACCGC 1052837
QY 597 ccacgttcctccctcccaagaagcgaggagcgatagtggtgat 642
DB 1052836 GCCCTTCGTGTACGGCGGAAAGCCGCGATGACGAAGCGGTCCAT 1052791
RESULT 37
ID AAS54057 standard; DNA; 1191 BP.
XX

AC AAS54057;
XX 13-FEB-2002 (first entry)
DT
XX Pseudomonas aeruginosa DNA for cellular proliferation protein #188.
XX
XX Antisense: ds; prokaryotic cellular proliferation gene;
XX antibiotic; antibacterial; drug design.
XX
XX Pseudomonas aeruginosa.
XX
XX WO200170955-A2.
XX 27-SEP-2001.
XX
XX 21-MAR-2001; 2001WO-US09180.
XX
XX 21-MAR-2000; 2000US-191078P.
XX 23-MAY-2000; 2000US-206848P.
XX 26-MAY-2000; 2000US-207727P.
XX 23-OCT-2000; 2000US-242578P.
XX 27-NOV-2000; 2000US-253625P.
XX 22-DEC-2000; 2000US-257931P.
XX 16-FEB-2001; 2001US-269308P.
XX
XX (ELIT-) ELITRA PHARM INC.
XX
XX Haselbeck R, Ohlsen KL, Zyskind JW, Wall D, Trawick JD, Carr GJ;
XX Yamamoto RT, Xu HH;
XX WPI; 2001-611495/70.
XX P-SDB; AAO36198.
XX
XX New polynucleotides for the identification and development of
XX antibiotics, comprise sequences of antisense nucleic acids -
XX
XX Claim 27; Seq ID No 7694; 51pp; English.
XX
XX The invention relates to antisense inhibitors of genes essential to
XX prokaryotic cellular proliferation, their use in identifying the
XX genes, their use in the discovery of novel antibiotics, the essential
XX genes themselves and the encoded proteins. The prokaryotes used are
XX *Escherichia coli*, *Staphylococcus aureus*, *Salmonella typhi*, *Klebsiella*
XX *pneumoniae*, *Pseudomonas aeruginosa* and *Enterococcus faecalis*. The
XX invention is also useful for the identification of potential new targets
XX for antibiotic development. The antisense nucleic acids can also be used
XX to identify proteins used in proliferation, to express these proteins,
XX and to obtain antibodies capable of binding to the expressed proteins.
XX The proteins can be used to screen compounds in rational drug discovery
XX programmes. The antisense nucleic acid sequence is also useful to screen
XX for homologous nucleic acids which are required for cell proliferation in
XX essential prokaryotic cellular proliferation protein.
XX Note: The sequence data for this patent did not form part
XX of the printed specification, but was obtained in electronic
XX format directly from WIPO at
XX ftp.wipo.int/pub/published_pcl_sequences.
XX
XX Sequence 1191 BP; 222 A; 420 C; 365 G; 184 T; 0 other;
SQ
Query Match 3.9%; Score 34.6; DB 23; Length 1191;
Best Local Similarity 52.4%; Pred. No. 3.6;
Matches 76; Conservative 0; Mismatches 69; Indels 0; Gaps 0;
QY 389 gctagatttgaggcgagcgtacacgcagcagcttcgtccgctgacgcacatgt 448
DB 602 ggcagcggtgtagtgagtgatcatcaagcagtgctgcgcgcgagctgtgcacaag 661
QY 449 acaaacgcgcgaataatcaaacgatatgacaataatcagcgagcggttcgcgga 508
DB 662 acaccagttcacatcaaccgcagcagcagcttcgtgatcgcgcccggtcgcgact 721

FT CDS 57503..58687
FT /tag= d
FT /product= "NysL protein"
FT complement (58786..58980)
FT /tag= e
FT /product= "NysM protein"
FT /note= "CDS does not include start codon"
FT complement (59045..60241)
FT /tag= f
FT /product= "NysN protein"
FT /note= "CDS does not include start codon"
FT complement (60238..61296)
FT /tag= g
FT /product= "NysD2 complete protein"
FT 120628..121308
FT /tag= h
FT /product= "NysR4 (long) protein"
PN WO200159126-A2.
PD 16-AUG-2001.
PF 08-FEB-2001; 2001WO-GB00509.
XX 08-FEB-2000; 2000GB-0002840.
XX 10-APR-2000; 2000GB-0008786.
XX 14-APR-2000; 2000GB-0009387.
PA (UYNO-) UNIV NORGES TEKNISK NATURVITENSKAPELIGE.
PA (SNTF) SINTER STIFTELSEN IND TEK FORSK.
PA (ALPH-) ALPHARMA AS.
PA (SINV-) SINTERVENT AS.
PA (DZIE/) DZIELENSKA H.
PA (ZOTC/) ZOTCHEV S B.
PA (SEBU/) SEKUROVA O N.
PA (FJAE/) FJAEVIRIK E.
PA (BRAU/) BRAUTASET T.
PA (STRO/) STROM A R.
XX
XX
PI Zotchev SB, Sekurova ON, Fjaervik E, Brautaset T, Strom AR;
PI Valla S, Ellingsen TE, Sletta H, Gulliksen O;
XX
XX WPI: 2001-557614/62.
DR P-PSDB: AAE10143, AAE10144, AAE10145, AAE10146, AAE10147, AAE10148,
DR AAE10149, AAE10150.
XX
XX New nystatin polyketide synthase polynucleotides and polypeptides,
PT useful as antibiotics and antifungals -
XX
XX Claim 1; Page 188-254; 266pp; English.
XX
XX The present invention relates to the cloning and sequencing of the gene
XX cluster encoding a modular type I polyketide synthase (PKS) enzyme
XX involved in the biosynthesis of the macrocyclic antibiotic nystatin.
XX The nystatin PKS is useful as antifungal antibiotics. The present
XX sequence is a Streptomyces noursei nystatin PKS gene cluster DNA.
XX
XX Sequence 125401 BP; 15664 A; 49692 C; 42871 G; 17174 T; 0 other;
SO

Query Match 3.8%; Score 34.2; DB 22; Length 125401;
Best Local Similarity 55.5%; Pred. No. 40;
Matches 66; Conservative 0; Mismatches 53; Indels 0; Gaps 0;
QY 520 gcgcctccgcacatacaaggggtcaacaatacatcaaaagccctgcgtgcggcgaaagca 579
DB 68371 ggcggcgccggcgctgcgtcgtatcatcaagatggtcgcgtgcgcacgcacgcacactg 68430
QY 580 acctctcctctccgcgcacacgtccctccctcccaagaagaagcgaggcgataggt 638
DB 68431 ccgcgcgcacctgcacgcgcgcgcgcgcgcctctctcgcacgtgacgtgctccgcgcgagtcgt 68489

RESULT 40
AAD25519
ID AAD25519 standard; DNA: 154746 BP.
XX
XX AAD25519:
AC 26-MAR-2002 (first entry)
XX
XX Human herpesvirus 2 complete DNA genome.
XX
XX Human herpesvirus 2; cytostatic; cancer; immunosuppressive; virucide;
XX antibacterial; fungicide; protozoacide; antirheumatic; antiinflammatory;
XX antiarthritic; rheumatoid arthritis; neuroprotective; multiple sclerosis;
XX immune response; vasotropic; vaccine; gene therapy; autoimmune disease;
XX vasculitis; ds.
XX
XX Human herpesvirus 2.
XX
XX WO200176643-A1.
XX
XX 18-OCT-2001.
XX
XX 06-APR-2001; 2001WO-US11372.
XX
XX 07-APR-2000; 2000US-195680P.
XX
XX (BAYU) BAYLOR COLLEGE MEDICINE.
XX
XX Orson FM, Kinsey BM, Bhogal BS;
XX
XX WPI: 2002-066308/09.
XX
XX Composition for oral delivery of vaccines, comprises expression vector
XX containing antigenic genomic sequence, bound to aggregated
XX protein-polycationic polymer conjugate or suspension -
XX
XX Disclosure: Page 90-132; 145pp; English.
XX
XX The invention relates to a composition comprising an expression vector
XX bound to an aggregated protein-polycationic polymer conjugate or
XX suspension. The expression vector contains a promoter polynucleotide
XX sequence operatively linked to a polynucleotide sequence encoding an
XX antigen which is a fragment of a gene or genome associated with an
XX infectious disease, cancer and autoimmune disease such as rheumatoid
XX arthritis, vasculitis, and multiple sclerosis, pathogenic genomes
XX consisting of bacterium, fungus, protozoa and virus such as human
XX immunodeficiency virus (HIV), herpes simplex virus (HSV), hepatitis C
XX virus (HCV), influenza and respiratory syncytial virus (RSV), and
XX optionally comprising a nucleotide sequence encoding a cytokine (or a
XX cytokine expression vector), is useful for inducing an immune response
XX (systemic and/or mucosal) in an organism. The cytokine expression vector
XX contains a sequence for granulocyte macrophage-colony stimulating factor
XX (GM-CSF) or interleukin-12 (IL-12). The polynucleotide sequences encoding
XX the antigen and the cytokine are under transcriptional control of same or
XX different promoter polynucleotide sequences. The expression vector, as a
XX DNA vaccine is useful for treating a condition in an organism. The
XX present sequence is human herpesvirus 2 complete DNA genome related
XX to the invention.
SO Sequence 154746 BP; 23003 A; 54218 C; 54701 G; 22824 T; 0 other;

Query Match 3.8%; Score 34.2; DB 24; Length 154746;
Best Local Similarity 60.0%; Pred. No. 44;
Matches 57; Conservative 0; Mismatches 38; Indels 0; Gaps 0;
QY 85 cgtctgcgccttctcgtctgcacacgcgtggaaacgcgtcgtgcacatcgtgctttac 144
DB 97311 ccgatagcggttcccaatccaccgcacggagttccgcctccagatcgtgctatgc 97370
QY 145 ctttaagaagaagc 179
DB 97371 caacgc 97405

Sequence 2712 BP; 617 A; 701 C; 734 G; 660 T; 0 other;

Query Match 3.8%; Score 34; DB 23; Length 2712;

Best Local Similarity 46.9%; Pred. No. 8;

Matches 106; Conservative 0; Mismatches 120; Indels 0; Gaps 0;

QY 134 tggcgtttaccctttaagaagacgcgcgcgtcgttcgccaatgtgtaagcag 193
DB 1991 TTGGCGTTTGGCTTAAACCGGATGGTTCGAGCCCTGTGGGGGATCGTCAGGCGC 1932
QY 194 gcatgaatccgcagcccaaacgcgttcgttcggaacgcgaagcgcgtt 253
DB 1931 TCCTGCTGCCCAACACAGCGTGCAGCATATGCCGACGCGCTCGGGGCGT 1872
QY 254 tggaaactggccccgcgttttcgaagaacgcgaagacataagaaatgttcaagcgg 313
DB 1871 TCATTCATTCGAGGCCCGCATGTCTTATCTTCGGGACATTCGATTCGAGGCGC 1812
QY 314 tacaagcgtgggaacatgtgcagcagcgtttggaacaacgaagc 359
DB 1811 CCACGAGCATCAGCTTTTCTCCAGCGCATTAAGCAACGATTCG 1766

RESULT 43

AAS89081 ID AAS89081 standard; cDNA; 2712 BP.

AC AAS89081;

DT 13-FEB-2002 (first entry)

DE DNA encoding novel human diagnostic protein #24885.

KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder; ss.

OS Homo sapiens.

FN WO200175067-A2.

PD 11-OCT-2001.

PE 30-MAR-2001; 2001WO-US08631.

PR 31-MAR-2000; 2000US-0540217.

PR 23-AUG-2000; 2000US-0649167.

PA (HYSE-) HYSEQ INC.

PI Drmanac RT, Liu C, Tang YT;

DR WPI; 2001-639362/73.

DR P-PSDB; ABG24894.

PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity

XX Claim 1; SEQ ID No 24885; 103pp; English.

XX The invention relates to isolated polynucleotide (I) and
XX polypeptide (II) sequences. (I) is useful as hybridization probes,
XX polymerase chain reaction (PCR) primers, oligomers, and for chromosome
XX and gene mapping, and in recombinant production of (II). The
XX polynucleotides are also used in diagnostics as expressed sequence tags
XX for identifying expressed genes. (I) is useful in gene therapy techniques
XX to restore normal activity of (II) or to treat disease states involving
XX (II). (II) is useful for generating antibodies against it, detecting or
XX quantitating a polypeptide in tissue, as molecular weight markers and as
XX a food supplement. (II) and its binding partners are useful in medical
XX imaging of sites expressing (II). (I) and (II) are useful for treating

CC disorders involving aberrant protein expression or biological activity.
CC The polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. AAS64197-AAS94364 represent novel human
CC diagnostic coding sequences of the invention.
CC Note: The sequence data for this patent did not appear in the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

Sequence 2712 BP; 660 A; 734 C; 701 G; 617 T; 0 other;

Query Match 3.8%; Score 34; DB 23; Length 2712;

Best Local Similarity 46.9%; Pred. No. 8;

Matches 106; Conservative 0; Mismatches 120; Indels 0; Gaps 0;

QY 134 tggcgtttaccctttaagaagacgcgcgcgtcgttcgccaatgtgtaagcag 193
DB 722 ttcggttttggttgaacgcgttcgttcggaacgcgaagcgcgttgcgcagcgc 781
QY 194 gcatgaatccgcagcccaaacgcgttcgttcggaacgcgaagcgcgtt 253
DB 782 ttcgtcgtcccaacaacacacgcgttcgttcggaacgcgaagcgcgttgcgcagcgc 841
QY 254 tggaaactggccccgcgttttcgaagaacgcgaagacataagaaatgttcaagcgg 313
DB 842 tcatacatccgcagcccatgtctatcttcggaacatgtcgaattttcggcag 901
QY 314 tacaagcgtgggaacatgtgcagcagcgtttggaacaacgaagc 359
DB 902 ccagagcaatcagcctttctccagcgattaaagaacagcattcg 947

RESULT 44

AAS90054 ID AAS90054 standard; cDNA; 2712 BP.

AC AAS90054;

DT 13-FEB-2002 (first entry)

DE DNA encoding novel human diagnostic protein #25858.

KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder; ss.

OS Homo sapiens.

FN WO200175067-A2.

PD 11-OCT-2001.

PE 30-MAR-2001; 2001WO-US08631.

PR 31-MAR-2000; 2000US-0540217.

PR 23-AUG-2000; 2000US-0649167.

PA (HYSE-) HYSEQ INC.

PI Drmanac RT, Liu C, Tang YT;

DR WPI; 2001-639362/73.

DR P-PSDB; ABG25867.

PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity

XX Claim 1; SEQ ID No 25858; 103pp; English.

